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Fall 2019

# STS 201-011: Understanding Technological Society

R. D. Cormier

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# TECHNOLOGICAL SOCIETIES PAST, PRESENT, AND FUTURE

Course Syllabus  
Fall 2019

STS 201.011 R. D. Cormier  
*Understanding* [rdcmr@njit.edu](mailto:rdcmr@njit.edu)  
*Technological Society* [robert.d.cormier@njit.edu](mailto:robert.d.cormier@njit.edu)

Central King 212 TBA  
MoTh 10:00-11:20AM MoTh 12:00-1:00PM

## COURSE DESCRIPTION

This course is a broadly chronological survey of historical, contemporary, and speculative technological societies. We will address, from a variety of disciplinary perspectives, the risks and rewards of technologically augmenting human capacities. We will examine the ways in which technology can help people (or harm them), promote justice (or injustice), and illuminate (or obscure) truth. The goal of this course is to impart a critical perspective on technology, understanding it as a means to an end and not an end in itself, and to help students develop the analytical skills needed to make logical and informed ethical and political judgments about large-scale technological developments.

## GENERAL EDUCATION REQUIREMENTS

### History and Humanities

"The liberal arts are a multi-faceted area encompassing communication; culture; history; humanities; philosophy; aspects of science, technology, and society; and the arts. The ability to communicate ideas is an essential characteristic of educated individuals. All students are expected to achieve proficiency in both oral and written English. All educated individuals are expected to understand and appreciate history and the world's cultures. The ideals of a liberal education transcend articular major fields and career goals. All students are expected to develop an interest in specific areas within the humanities."<sup>1</sup>

## REQUIRED MEDIA

All media can be found on Blackboard under the 'Documents' tab prior to each class, or at the URLs provided in the Course Schedule. While most of the materials are readings in PDF form, we will also be watching some video clips. Highlighted text in the PDFs will give you the basic idea of what the reading is about, but you are expected to have read the entire text before class. Anything in the readings that is crossed out will not be evaluated. Optional readings are indicated as such. You are required to purchase only one book: *Four Futures* by Peter Frase, available at the campus bookstore and many book retailers. I may modify the schedule to keep up with what's happening in the world; if so, I will make an announcement in class and over email.

## COURSE REQUIREMENTS

Students will be expected to take detailed notes and participate in discussions in class (or online). Reading comprehension will be evaluated by quizzes and a take-home midterm. Logical and

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<sup>1</sup> <https://bit.ly/2ktEE2n>

critical analysis will be evaluated on the basis of a major paper supported by a proposal and an annotated bibliography.

- **ATTENDANCE** — 1% deduction for each unexplained absence (with two exceptions)  
*You are expected to attend class prepared to discuss the readings. You are excused from two lectures this semester. I will deduct 1% from the final grade for each additional unexplained absence. Absences supported by a doctor's note will not result in deductions. You are responsible for keeping track of your attendance record.*
- **FIVE CANVAS QUIZZES** — 4% each (20% total)  
*There will be six quizzes total (one every two weeks on average). Only your top five quiz scores will count toward your final grade. I will announce the quizzes the week before they are due.*
- **PARTICIPATION** — 10% total  
*You are expected to contribute your perspective on the topic or reading to the discussion. I will be keeping track of participation in class on the discussion slides. Your fellow group members will also have a chance to evaluate your participation in group activities throughout the semester. If you are worried that you are not contributing enough or that your contributions are not being recorded, or if you are uncomfortable speaking in class, please see me.*
- **CANVAS GROUP MIDTERM** — 20% total (15% test, 5% review notes)  
*Details to come. You will meet up independently with your groups and review the material for the midterm—one person will moderate, one will take notes, and the others will come prepared with questions and interpretations.*
- **FOUR (OR MORE) FUTURES** — 50% total  
*Details to come. I will post the essay prompt halfway through the semester. There will be four parts: a short essay proposal (5%), an annotated bibliography (5%), a symposium on the last day of class (10%), and a final essay (30%).*

## TECHNOLOGY POLICY

Please print out the readings (they are usually pretty short, and should not exceed your printing allowance) and bring a writing utensil with which to make notes on that paper and a binder or folder to put it in. Place your phone face down on your desk. You will need it handy for some in-class exercises. If I see you occupied with a phone, laptop, tablet, or VR goggles, I will politely ask you if you have a hard copy of the reading with you and ask you to please turn your attention to note-taking and participating. Thanks in advance for your cooperation!

## ACADEMIC DISHONESTY

Academic dishonesty includes any act that is designed to obtain fraudulently, either for oneself or for someone else, academic credit, grades, or other recognition that is not properly earned or that adversely affects another's grade. The following list of examples is not exhaustive:

- Cheating on exams or assignments by the use of books, electronic devices, notes, or other aids when these are not permitted, or by copying from another student
- Collusion: two or more students helping one another on an exam or assignment
- Ringers: taking an exam for someone else, or permitting someone else to take one's exam
- Plagiarizing: copying someone else's writing or paraphrasing it too closely, even if it constitutes only some of your written assignment, without proper citation
- Falsifying documents or records related to credit, grades, status (e.g., adds and drops, grading, transcripts), or other academic matters
- Altering an exam or paper after it has been graded in order to request a grade change

## ACCESSIBILITY RESOURCES AND SERVICES

If you have a physical, psychological, medical or learning disability that may impact your course work, please contact the Office of Accessibility Resources and Services (Kupfrian Hall 201) at 973-596-5417. They will determine with you what accommodations are necessary and appropriate. All information and documentation is confidential.

### **“HELP ME HELP YOU”**

Jerry Maguire said it best. Every year I am flooded with emails at the end of the semester from students requesting this or that grade. Very often they are disappointed when I tell them that there is little I can do for them so late in the semester. To avoid this, set your goals early and reevaluate them often. Visit me during office hours or schedule a Google Hangout so we can discuss your progress and what you can do to improve.

# TECHNOLOGICAL SOCIETIES PAST, PRESENT, AND FUTURE

Course Schedule  
Fall 2019

## WEEK I: INTRODUCTION

### 01 INTRODUCTION

5 September 2019

*How will the course unfold?*

- ☐ URSULA K. LE GUIN, "A rant about 'technology'" <https://bit.ly/2ZCrXAH>  
*What does Le Guin have to say about the label of 'soft' science fiction?*  
*What is her definition of technology?*

## WEEK II: ANCIENT CIVILIZATIONS

### 02 AFRICA AND ASIA

9 September 2019

*What technologies made early human societies possible?*

- ☐ BRIAN GABRIAL, "History of Writing Technologies"  
*Why does Socrates caution against writing?*  
*This was written over a decade ago—how has digital culture changed since then?*

### 03 EUROPE

12 September 2019

*Technē, technique and technology in Greece and Rome.*

- ☐ ARISTOTLE, *Nicomachean Ethics* (Book VI)  
*What is the difference between Greek and Christian conceptions of virtue and the soul?*  
*What is Aristotle's definition of practical knowledge?*

## WEEK III: AMERICAN CIVILIZATIONS

### 04 PRECOLONIAL AMERICA

16 September 2019

*Indigenous agricultural and fire management techniques.*

- ☐ ZACH FITZNER, "The myth of an 'unpeopled' jungle" <https://bit.ly/2ODbZpZ>  
*How could this myth emerge?*  
*How is it connected to the myth of 'manifest destiny'?*
- ☐ YOSHI MAEZUMI ET AL., "New Insights ..." (Abstract) <https://bit.ly/2M3xldJ>  
*What are "cal yrs B.P."?*  
*What lessons can we learn from precolonial Amazonia?*

### 05 POSTCOLONIAL AMERICA

19 September 2019

*The Atlantic slave trade and the U.S. Civil War.*

- ☐ W. E. B. DU BOIS, *Black Reconstruction in America* (Chapter 1)  
*Why was slavery in the U.S. an anomaly?*  
*What is the "real modern labor problem" according to Du Bois?*

#### ★ QUIZ 01

## WEEK IV: THE TWENTIETH CENTURY

### 06 THE WORLD WARS

23 September 2019

*Technological society in Russia and Germany.*

- ☐ PAUL VIRILIO, *War and Cinema* (Chapter 4)  
*What are the logistics of perception?*  
*Why is this chapter so compressed?*

### 07 THE SPACE RACE

26 September 2019

*Technology and the Cold War.*

- ☐ THE HISTORY CHANNEL, "The Space Race" <https://bit.ly/2CWmJZR>  
*What was the global political context in which Sputnik was launched?*  
*How did the first space race effectively end?*
- ☐ ALAN YUHAS, "The new space race" <https://bit.ly/2EFgQAN>  
*Who is competing now?*  
*What is new about the relationship between governments and companies?*

## WEEK V: MASS MEDIA

### 08 EXTENSIONS OF THE HUMAN

30 September 2019

*How has mass media shaped the world in which we reside?*

- ☐ MARSHALL MCLUHAN, *Understanding Media* (Chapter 1)  
*What does McLuhan mean by "the medium is the message"?*  
*How do we get our bearings in a culture saturated with media and bias?*

### 09 THE SPECTACLE

3 October 2019

*What is media spectacle and what does it do to us?*

- ☐ GUY DEBORD, *Society of the Spectacle* (Excerpts)  
*What does Debord mean when he says life has become mere representation?*  
*Can you think of an example of a powerful class that "claims not to exist"?*
- ☐ ROBERT ZARETSKY, "Trump and the 'Society of the Spectacle'" <https://nyti.ms/2ldrswg>  
*Where do Debord and Karl Marx disagree?*  
*What point does the example of the crowd at Trump's inauguration demonstrate?*

#### ★ QUIZ 02

## WEEK VI: THE SEXUAL REVOLUTION

### 10 REPRODUCTION

7 October 2019

*Do mothers suffer through childbirth? If so, why do we tolerate it?*

- ☐ SHULAMITH FIRESTONE, *The Dialectic of Sex* (Chapter 10)  
*What is Firestone's issue with the family unit?*  
*Is a social revolution necessary to ensure our survival?*

### 11 TRANSITIONING

10 October 2019

*Gender dysphoria, hormone therapy and gender performance.*

- ☐ CONTRAPOINTS, "Transtrenders" (Explicit) [https://youtu.be/EdvM\\_pRfuFM](https://youtu.be/EdvM_pRfuFM)

*What positions do Tiffany Tumbles, Baltimore Maryland and Jackie Jackson represent?  
What does Tiffany's conversation with Justine reveal?*

- ☐ MOLLY FISCHER, "Think gender is performance? ..."  
*What does Judith Butler mean by the term 'performativity'?*  
*What Simone De Beauvoir quote has Laverne Cox cited in interviews?* <https://bit.ly/2lF3soa>

## WEEK VII: CLIMATE CHANGE

### 12 ENVIRONMENTAL RACISM

17 October 2019

*From Newark to New Delhi and Flint to the Far East.*

- ☐ MARIA RAMIREZ FISHER, "On the Road from Environmental Racism to ... Justice"  
*How does Fisher define environmental racism?*  
*How can we collectively pursue environmental justice?*

### 13 THE ANTHROPOCENE

14 October 2019

*What is the Anthropocene?*

- ☐ VARIOUS ARTISTS, *Welcome to the Anthropocene* <http://www.anthropocene.info>  
*Which of the planetary boundaries exceeded in 1990 are back in a safe range?*  
*What is 'resilience thinking'?*

#### ★ QUIZ 03

## WEEK VIII: GENETIC ENGINEERING

### 14 GENETICALLY MODIFIED ORGANISMS

21 October 2019

*Monsanto and proprietary DNA.*

- ☐ D. BARTLETT AND J. STEELE, "Monsanto's harvest of fear"  
*How did it become possible to legally patent seeds in the U.S.?*  
*What are the practical consequences of this precedent?* <https://bit.ly/2ns0yRh>

### 15 HUMAN GERMLINE MODIFICATION

24 October 2019

*OvaScience and the CCP.*

- ☐ A. CRIBBS & S. PERERA, "... Bioethics of CRISPR-Cas9 ..."  
*How does this form of gene editing work?*  
*What are its associated risks?* <https://bit.ly/31rCjok>
- ☐ JON HEGGIE, "Should we edit the human germline?" <https://on.natgeo.com/31CgD90>  
*What the benefits and risks of germline editing?*  
*Should this be decided democratically or by scientific experts?*

## WEEK IX: PERFORMANCE ENHANCEMENT

### 16 CYBORGS

28 October 2019

*Where does the human end and the machine begin?*

- ☐ HARI KUNZRU, "You are cyborg" <https://www.wired.com/1997/02/ffharaway/>  
*What does Haraway have to say about athletic technology?*  
*How does Haraway's cyberfeminism compare to Firestone's*

17 24/7

31 October 2019

*Is there a war on sleep?*

- ☐ JONATHAN CRARY, 24/7 (Chapter 1)  
*If machines supposedly allow us to work less, why are we not sleeping more?*  
*What are some of the existing critiques of and attempts to overcome sleep?*

★ QUIZ 04

## WEEK X: DIGITAL SURVEILLANCE AND CONTROL

18 GAMIFIED CITIZENSHIP

4 November 2019

*Social credit systems.*

- ☐ NICOLE KOBIE, "... China's social credit system" <https://bit.ly/2Gdwe8m>  
*How does the system work and what is it intended to achieve?*  
*Could a similar system appear in the U.S.? What would it look like?*

19 BIG TECH

7 November 2019

*Antitrust laws and*

- ☐ NELLIE BOWLES, "Fighting Big Tech ..." <https://nyti.ms/2GekUaJ>  
*Why do liberals and conservatives agree that Big Tech is a problem?*  
*What are some of the proposed alternatives?*

★ BEGIN WORK ON ESSAY PROPOSAL & ANNOTATED BIBLIOGRAPHY

## WEEK XI: ARTIFICIAL INTELLIGENCE

20 AUTOPILOT

11 November 2019

*Self-driving vehicles and aircraft.*

- ☐ AMY MAXMEN, "Self-driving car dilemmas..." <https://go.nature.com/2Q1Kkeg>  
*What "ethical paradox" about self-driving cars did scientists discover in 2016?*  
*What three groups of nations are depicted in the "moral compass" graphic?*

21 COGNICULTURE

14 November 2019

*How should we live and think with (and alongside) artificial intelligence?*

- ☐ RAKESH PIMPLIKAR ET AL., "Cogniculture ..." <https://arxiv.org/pdf/1712.03724.pdf>  
*What kind of 'governance mechanism' is being proposed here?*  
*What field studies the shortcomings of AI systems?*
- ☐ EDWARD ASHFORD LEE, "Coevolution of Human and Artificial Intelligences" (2017)  
*What disadvantages do machines have compared to humans, according to Lee?*  
*What is the example of the boats supposed to show?*

★ QUIZ 05

## WEEK XII: AUTOMATION

22 THE AUTOMATING ANIMAL

18 November 2019

*What capacities distinguish human beings from other animals?*



- ☐ ANTONE MARTINHO-TRUSWELL, "To automate is human"  
*What is philosophical anthropology?*  
*How do we distinguish tool use from automation?*

<https://bit.ly/2HZoepj>

## 23 MANDATORY SQUIRT SESSION

21 November 2019

*It stands for "Super Quiet Uninterrupted Independent Reading Time." Light shushing encouraged.*

- ☐ PETER FRASE, *Four Futures* (Introduction)  
*What is speculative fiction and what role does it play in this book?*  
*Are Frase's basic assumptions about automation and ecology correct?*

## WEEK XIII: FOUR OR MORE FUTURES I

### 24 COMMUNISM

25 November 2019

*Equality and abundance.*

- ☐ PETER FRASE, *Four Futures* (Chapter 1)  
*Why doesn't Marx spend much time describing what a communist society would look like?*  
*Why are the Ferengi the butt of jokes in the Star Trek universe?*

### 25 RENTISM

26 November 2019

*Hierarchy and abundance.*

- ☐ PETER FRASE, *Four Futures* (Chapter 2)  
*Who is Aaron Swartz and what does his case have to do with intellectual property?*  
*How might economic elites maintain their power and wealth in an era of "total automation"?*

- ★ **TUESDAY SESSION BEFORE THANKSGIVING**
- ★ **ESSAY PROPOSAL & ANNOTATED BIBLIOGRAPHY DUE**

## WEEK XIV: FOUR OR MORE FUTURES II

### 26 SOCIALISM

2 December 2019

*Equality and scarcity.*

- ☐ PETER FRASE, *Four Futures* (Chapter 3)  
*What is the example from Kim Stanley Robinson's Pacific Edge supposed to illustrate?*  
*What are some of the "compelling challenges" faced by an eco-socialist future?*

### 27 EXTERMINISM

5 December 2019

*Hierarchy and scarcity.*

- ☐ PETER FRASE, *Four Futures* (Chapter 4)  
*What is the comparison of Elysium and The Hunger Games supposed to illustrate?*  
*From whom does Frase inherit the category of exterminism?*

- ★ **QUIZ 06**

## WEEK XV: CONCLUSION

### 28 FOUR OR MORE FUTURES SYMPOSIUM

9 December 2019

*Which future do you endorse? Can you propose an alternative future based on speculative fiction?*

□ PETER FRASE, *Four Futures* (Conclusion)

*What does Frase say to those who view socialism and communism as “hopes of the good”?*

*To what famous William Gibson quote does Frase refer at the end of the book?*

★ **FINAL ESSAY DUE DATE TO BE ANNOUNCED**